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Radioisotope Cisternographic Study on Intracranial Arachnoid Cysts

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The dynamics of the CSF circulation in six cases of intracranial arachnoid cysts was examined by radioisotope cisternography using 0.5 to 1.0 mCi of $^{169}$Yb DTPA or 50 to 100 microCi of $^{131}$I HSA injected into the lumbar subarachnoid space. Serial scintigrams were obtained with rectilinear scintillation scanner at 2, 4, 6, 24 and 48 hours after injection.

The communication between the cavity of arachnoid cyst and subarachnoid space was recognized in all cases. The cysts were best visualized at 24 hours in most cases. Four patterns of the entry and stasis of radioisotope in cysts were observed as follows:

1) rapid filling of RI into the cyst and delayed clearance,
2) both rapid filling and clearance,
3) slow filling and delayed clearance,
4) no filling.

RI Cisternographic Findings in Microcephalic Infants with Persistent Chronic Subdural Hematoma

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In our clinic, linear craniectomy or expanding craniectomy has been performed to the infants with secondary craniostenosis or microcephalus and radioisotope cisternography has been studied on these patients.

Recently the persistent chronic subdural hematoma is found by subdural investigation at surgery and proved by histological study to have the growing of connective tissue and deposition of hemosiderin in it's capsulae.

The characteristic findings in radioisotope cisternogram of 10 cases with such hematoma are summarized in comparison with those of 13 cases without hematoma as follows.

1) Higher incidense of abnormal filling in basal cisterns (block; 20%, dilatation: 40%, asymmetry: 50%).
2) Poor convexity filling noted as Negative type (Messert).
3) Reversion of asymmetry in convexity filling, 50% in unilateral hematoma, 67% in bilateral hematoma.
4) Delayed C.S.F. circulation, delayed convexity clearance.
5) Ventricular reflex (70%).

These findings indicates the evidence of disturbance in C.S.F. dynamics due to such old hematoma and following brain atrophy in our series.

Although the chronic subdural hematoma has been well known as a category which developed the increase in their head size by increased intracranial pressure and abnormal C.S.F. dynamics.